ATTACHMENT A
ADDITIONAL COORDINATION LETTERS

JANET NAPOLITANO
Governor

DONALD BUTLER
Director

Arizona Department of Agriculture

1688 W. Adams Street, Phoenix, Arizona 85007
(602) 542-3578 FAX (602) 542-0466

July 28, 2005

William Knight
Arizona Department of Transportation
206 S. 17th Avenue
Phoenix, Arizona 85007

RE: TRACS No. 195 YU 0 H5774 01D
Federal Project No. HPP-900-A (022)

Dear Mr. Knight:

In reference to the above project. Below are some mitigation suggestions:

1. Reduce impact by avoiding disturbance to as many individuals as possible. Limit disturbance to the width of construction zone or narrower within sand food habitat.

2. Do not construct additional access roads within sand food habitat.

3. Restrict all equipment and vehicles to existing roads and the construction zone within sand food habitat.

4. Stockpile topsoil removed from the area for rehabilitation of the right-of-way following construction.

5. Move any individuals found within the construction area to the perimeter to spread seed to the new road perimeter.

We appreciate the opportunity to review the proposed project. If you need additional information, please contact me at 602/542-3292.

Sincerely,

James McGinnis

James McGinnis
Resource Protection
Environmental Services Division

-----Original Message-----
From: Cathy_Gordon@fws.gov [mailto:Cathy_Gordon@fws.gov]
Sent: Friday, October 14, 2005 6:01 PM
To: Melissa Maiefski
Cc: steve.thomas@fhwa.gov
Subject: Fw: Memo and Draft Conference Opinion for the Area Service Highway in Yuma County

I am sending these documents again. Please see below.

Thank you,
Cathy Gordon (Office Assistant)
phone: 602-242-0210 x201
M-F 8:30-6:00 flex Wed (week 2)

----- Forwarded by Cathy Gordon/R2/FWS/DOI on 10/14/2005 05:58 PM -----

Cathy Gordon/R2/FWS/DOI 10/14/2005 02:27 PM		To: mmaiefski@dot.stat.az.us cc: steve.thomas@fhwa.gov, Jim Rorabaugh/R2/FWS/DOI@FWS Subject: Memo and Draft Conference Opinion for the Area Service Highway in Yuma County

(Embedded image moved to file: pic32591.jpg)

(Embedded image moved to file: pic18762.jpg)

(See attached file: Biop ASH FTHL Sep 05 trns.doc)(See attached file: Biop ASH FTHL Sep 05.doc)

If you have any questions, please contact Jim Rorabaugh at 602-242-0210 x238.

Thank you,
Cathy Gordon (Office Assistant)
phone: 602-242-0210 x201
M-F 8:30-6:00 flex Wed (week 2)

AESO/SE
02-21-95-F-0479-R1 October 14, 2005

Mr. Robert E. Hollis, Division Administrator
Federal Highway Administration, Arizona Division
One Arizona Center, Suite 410
Phoenix, Arizona, 85004

Dr. Mr. Hollis:

Please find attached our draft conference opinion for the Area Service Highway in Yuma County, Arizona. This opinion is in response to your September 8, 2005, request for reinitiation of formal consultation/conference with the U.S. Fish and Wildlife Service pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended. The opinion addresses impacts of the proposed action on the flat-tailed horned lizard (*Phyrnosoma mcallii*), a species proposed for threatened status.

We look forward to your comments on this draft, and upon receipt of any comments we will promptly produce a final conference opinion. Please coordinate with Jim Rorabaugh (x238) or Sherry Barrett (520) 670-6150 (x223) of my staff regarding any questions on the document. We appreciate your efforts to conserve Arizona's imperiled species and biotic communities.

Sincerely,

/s/ Steven L. Spangle
Field Supervisor

cc: Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ (w attachment)
Field Supervisor, Fish and Wildlife Service, Carlsbad, CA (attn P. Sorensen, w/attachment)
Branch Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ (w/o attachment)
Regional Supervisor, Arizona Game and Fish Department, Yuma, AZ (w/o attachment)
Area Manager, Bureau of Reclamation, Yuma, AZ (attn C. Hoeft, w/o attachment))
Ron Pearce, Range management Officer, Marine Corps Air Station – Yuma, Yuma, AZ (w/o attachment)

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AESO/SE
02-21-95-F-0479-R1 Xxxxxxxx,xx, 2005

Mr. Robert E. Hollis, Division Administrator
Federal Highway Administration, Arizona Division
One Arizona Center, Suite 410
Phoenix, Arizona, 85004

Dr. Mr. Hollis:

Thank you for your request for reinitiation of formal consultation/conference with the U.S. Fish and Wildlife Service (USFWS) pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act). Your request was dated September 8, 2005, and received by us on September 12, 2005. At issue are impacts that may result from the proposed Yuma Area Service Highway (ASH) located south and east of Yuma, Yuma County, Arizona. The proposed action may affect the flat-tailed horned lizard (*Phyrnosoma mcallii*), a species proposed for threatened status.

This draft conference opinion is based on information provided in the September 2002 biological assessment (Logan Simpson Design 2002), February 2005 draft environmental mitigation measures for the ASH (Arizona Department of Transportation and Federal Highways Administration 2005), field investigations, and other sources of information. Literature cited in this conference opinion is not a complete bibliography of all literature available on the flat-tailed horned lizard, effects of highway construction, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at this office.

CONSULTATION HISTORY

- July 24, 2003. We issued a final biological and conference opinion to you on the ASH, which concluded that the proposed action was not likely to jeopardize the continued existence of Peirson's milkvetch (*Astragalus magdalenae peirsoni*) and the mountain plover (*Charadrius montanus*). We also included a concurrence that the project may affect, but was not likely to adversely affect, the Sonoran pronghorn (*Antilocapra americana sonoriensis*). You had requested conferencing on the flat-tailed horned lizard, but the proposal to list the species was withdrawn during consultation. Consultation history up to the date of the opinion is included in that opinion.

- February 2005. In collaboration with Arizona Department of Transportation, you issued the "Draft Environmental Mitigation Measures for the Yuma Area Service Highway, Arizona". This document and the included mitigation measures were the end product of several meetings and

conference calls with permitting agencies on the project, the flat-tailed horned lizard Interagency Coordination Committee (ICC), and the flat-tailed horned lizard Management Oversight Group (MOG). The mitigation measures and compensation adhered to the recommendations for such projects in the 2003 "Flat-tailed Horned Lizard Rangewide Management Strategy" (Flat-tailed horned lizard Interagency Coordination Committee 2003).

- August 2005. You issued your draft Environmental Assessment for the ASH

- September 12, 2005. We received your September 8, 2005, request for reinitiation of consultation/conferencing.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Arizona Department of Transportation (ADOT) and Federal Highway Administration (FHWA) propose to construct, operate, and maintain an express highway to carry traffic between the new Port of Entry (POE) at the U.S./Mexico border near San Luis to Interstate 8 at Araby Road (Figure 1). The typical right-of-way width would be between 240 feet and 280 feet except at the traffic interchange locations, which would have greater right-of-way requirements. The ASH would be designed as a controlled access facility from Avenue E to Business Route 8 in the ultimate configuration. Access control from adjacent lands would not be provided from Business Route 8 to I-8 in either the interim or ultimate configurations. There would be no direct access to ASH from adjacent properties along the remaining segments of the proposed roadway. A gated driveway accessible to authorized personnel would be provided for a weather station. Access to the Yuma State Medium Security Prison and the future City of Yuma landfill would be maintained during construction, and new access routes to these facilities would be installed in the initial construction of the ASH. The existing State prison access on Avenue B would not be affected. The eastern portion of the prison would be served via an access road from Avenue B on the south side of the ASH. Access to the southern half of the City of Yuma's landfill would also be provided from an extension of this road. When Yuma commences operations on the northern half of the landfill, an access road on the north side of the ASH would be developed to serve the northern half of the facility. An overpass would be provided at County 19th Street in the initial construction to allow Marine Corps Air Station-Yuma (MCAS-Yuma) vehicles to access the MCAS-Yuma Rifle Range and other facilities.

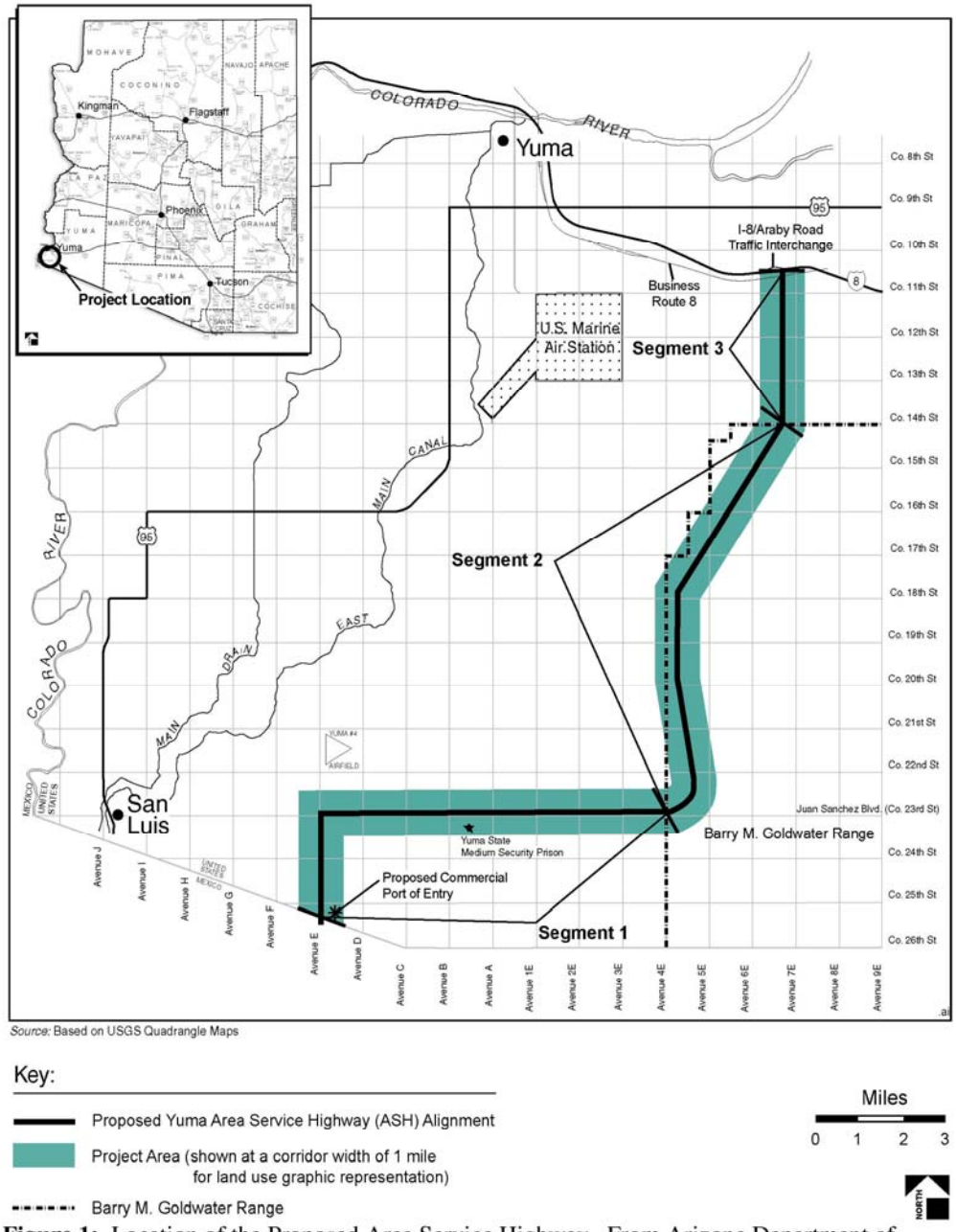

Figure 1: Location of the Proposed Area Service Highway. From Arizona Department of Transportation and Federal Highway Administration (2005).

Fencing would be constructed along the ASH right-of-way. Gates would be installed to allow egress and ingress for the U.S. Border Patrol and MCAS-Yuma personnel. In addition, an access road would be constructed between the ASH alignment and a BLM materials source pit. The specific details and locations of the gates would be evaluated and agreed to by the affected parties during final design. Additional descriptions and design specifications for the highway can be found in our 2003 opinion, Logan Simpson Design (2002), and Arizona Department of Transportation and Federal Highway Administration (2005).

Since the issuance of our biological/conference opinion in 2003, FHWA and ADOT have, in consultation with the ICC and MOG, revised the conservation measures for the flat-tailed horned lizard (Arizona Department of Transportation and Federal Highway Administration 2005). These measures, summarized here, amend the "Mitigation Measures" in your 2002 biological assessment and our 2003 opinion. These conservation measures were based on the recommendations in Flat-tailed horned lizard Interagency Coordinating Committee (2003), and they were reviewed by the ICC and MOG and found to be consistent with that document. See pages 89-90 of Arizona Department of Transportation and Federal Highway Administration (2005) for a sequence of events regarding this review process.

Conservation Measures

1. The northern segment of the ASII has been shifted more to the west where the Preferred Alternative alignment will be constrained by the presence of overhead transmission lines near County 17th Street. This modification conserves 178 acres of flat-tailed horned lizard habitat.

2. The curve at County 23rd Street has been realigned (while maintaining high-speed vehicle standards) to conserve 240 acres of habitat.

3. The ASH will eliminate the existing parking lot at the MCAS-Yuma Rifle Range on the Goldwater Range at County 19th Street. Relocation of the parking lot will be to a previously disturbed area, conserving an additional 1–2 acres of flat-tailed horned lizard habitat within the flat-tailed horned lizard Yuma Desert Management Area (MA).

4. Monetary 1:1 compensation will be provided for flat-tailed horned lizard habitat that is under the jurisdiction of agencies that are signatory to the flat-tailed horned lizard Conservation Agreement and that is lost or isolated due to the construction of the ASH.

A. ADOT will fully compensate for approximately 623 acres of flat-tailed horned lizard habitat lost to the ASH right-of-way and approximately 3,654 acres of habitat isolated by the ASH (parcels 2, 3, and 4, see Figure 2). If the City of Yuma agrees to a land exchange that would relocate the landfill site north of the ASH (Option A, below), ADOT will receive a credit of 328 acres towards its obligation for habitat compensation in recognition of its efforts to address threats to flat-tailed horned lizards in the Yuma Desert MA.

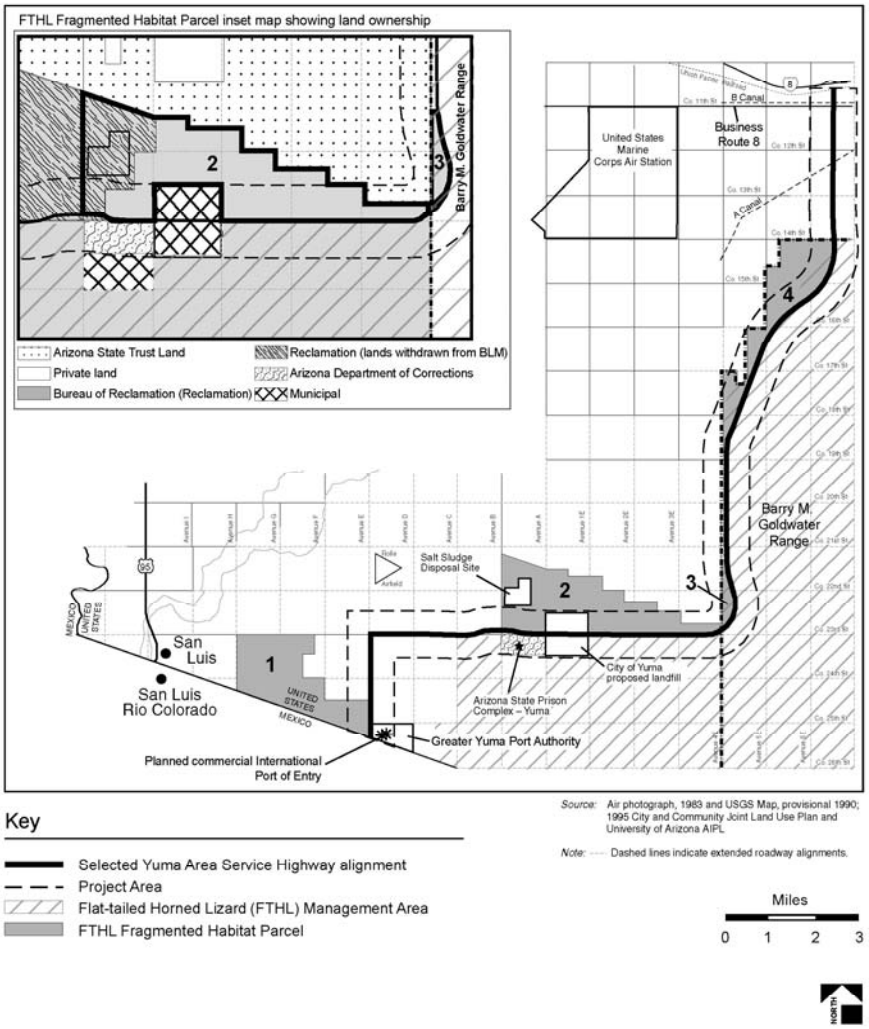

Figure 2: ASH alignment, fragmented parcels of lizard habitat, and associated features. From Arizona Department of Transportation and Federal Highway Administration (2005).

Option A. ADOT will enter into an Intergovernmental Agreement with the City of Yuma and Bureau of Reclamation, prior to construction of the ASH between Avenue 4E to Avenue B, to exchange the existing proposed landfill site for Reclamation land north of County 23rd Street. ADOT will reimburse the City of

Yuma for the cost of transferring the land to Reclamation and of obtaining an in-kind parcel on Reclamation land. To reimburse the City of Yuma for funds that have been expended in preparation for the site's development as a landfill, ADOT will provide funding for any in-kind investigations or permits that the City of Yuma has already invested in for the portion of the landfill site south of County 23rd Street. Under Option A, ADOT will receive a credit of 328 acres towards its obligation for habitat compensation in recognition of its efforts to address threats to flat-tailed horned lizards in the Yuma Desert MA.

Option B. ADOT will compensate in full for the 623 and approximately 3,654 acres of habitat lost or isolated due to the project (4,277 acres).

B. Bureau of Land Management in California will provide a priority list for flat-tailed horned lizard parcels targeted for acquisition.

C. ADOT will appraise the priority properties identified by BLM.

D. ADOT will use appraised values to calculate compensation funds; the calculated values will include due diligence costs and administrative costs.

E. ADOT will then transfer compensation funds to BLM's compensation fund accounts as delineated in Flat-tailed horned lizard Interagency Coordinating Committee (2003).

5. Under Options A or B, within a year of the approval of the EA, ADOT will develop an Intergovernmental Agreement with Reclamation for the construction of standard right-of-way fencing along the western boundary of the Yuma Desert MA. ADOT will fund the construction of the fence including design, materials, construction and contract administration. Reclamation will provide necessary construction easements and National Environmental Policy Act clearances for the fence. Details such as length, location, maintenance, and clearances for the fencing will be determined during the formulation of the Intergovernmental Agreement. This fencing will reduce off-highway vehicle access and other intrusions into the MA.

6. ADOT will construct special flat-tailed horned lizard barrier fencing to prevent lizards from entering construction zones or roadways.

a) Standard ADOT right-of-way game fencing will be modified so that the bottom two strands of barbed wire are at 15 inches and 30 inches above the ground. Lizard barrier material will be securely fastened to fence posts and to the bottom two strands of barbed wire using metal clips or wire, not plastic. The barrier material will consist of 0.25-inch wire mesh that extends 6 inches below the ground surface and 30 inches above the ground surface. Additional fence posts will be placed at any junctions between segments of wire mesh to prevent the formation of gaps. Where barrier fencing ends, the wire mesh will be extended in an arc in the opposite direction from the roadway for a distance of 3 to 10 feet, to direct animals moving along the fence away from the road. The arcing portion of the fence will be supported by stakes or fence posts and buried to a depth of 6 inches, and will not leave the ADOT right-of-way.

b) ADOT Yuma District will be responsible for the maintenance of flat-tailed horned lizard barrier fence along the ASH right-of-way to ensure its effectiveness, including but not limited to the repair of gaps under or in the fence and the removal of accumulated debris or sand along the fence. The barrier fence will be inspected daily by biological monitors from April through September in active construction areas, and every four weeks over that period in other areas for the first year following construction of the fence. If breaks occur in the barrier fence during construction, a minimum of one acre of the adjacent exclusion zone will be resurveyed to remove flat-tailed horned lizards. In following years while construction of the ASH continues, the barrier fence will be inspected in March and July. ADOT Yuma District will also inspect the FTHL barrier fence in March and July each year after construction is complete. An Intergovernmental Agreement will be established with land-managing agencies adjacent to the right-of-way to allow for fence maintenance activities by ADOT.

c) ADOT Yuma District and the contractor will incorporate barrier fencing into the ASH right-of-way fence in the following locations:

- On the east side of the right-of-way from the BMGR boundary at County 14th Street south to County 23rd Street, then continuing on the south side of the ASH as it turns west to the Arizona State Prison Complex, a distance of approximately 15 miles.
- On the south side of the ASH right-of-way from Avenue B at the Arizona State Prison Complex to end at Avenue C, a distance of approximately 1 mile.
- On the north side of the ASH right-of-way along the County 23rd Street alignment from Avenue B west to end at Avenue E (where the ASH turns to the south), a distance of approximately 3 miles.

7. Biological monitors will be present during construction activities to oversee adherence to, and implementation of, conservation actions for the flat-tailed horned lizard.

a. The contractor will provide biological monitors who are experienced and capable of conducting flat-tailed horned lizard field monitoring. Biological monitors are to have

sufficient education and field experience to understand flat-tailed horned lizard biology and behavior and to be able to identify flat-tailed horned lizard tracks and scat. Only persons working under a valid AGFD Scientific Collecting Permit are allowed to handle and relocate flat-tailed horned lizards. The contractor will submit the names and qualifications of the biological monitors for ADOT approval.

b. The biological monitors will have the authority to oversee compliance with protective measures for the flat-tailed horned lizard and will be the primary contact for matters associated with these measures. The biological monitors will have the responsibility to notify the ADOT Engineer and ADOT to halt activities that are in violation of the mitigation terms and conditions.

c. Biological monitors will be present to oversee all surface-disturbing activities, including the construction of barrier fencing, to search for and remove flat-tailed horned lizards from the area. The work area will be examined periodically, at least hourly when surface temperatures exceed 30° Celsius, for the presence of flat-tailed horned lizards. In addition, all sites likely to trap a lizard (e.g., open pipeline trenches, holes, deep excavations) will be inspected for the presence of flat-tailed horned lizards each day and prior to backfilling from April through September. Trenches, holes, and excavations will be covered to prevent entrapment of flat-tailed horned lizards. If barrier fencing has been constructed that effectively isolates the work area from other flat-tailed horned lizard habitat, and lizards have been removed from this established exclusion zone, then biological monitors do not need to be present during construction activities.

d. Before additional ground-disturbing activities can occur in areas isolated from other flat-tailed horned lizard habitat by barrier fencing, lizard removal surveys must first be completed. Survey methods are based on the protocols in the RMS, and they will be implemented to maximize captures of flat-tailed horned lizards. They will also incorporate a systematic component (e.g., transects), and they may include methods such as raking around shrubs and driving on roadways within the exclusion area to search for flat-tailed horned lizards. The minimum survey effort to establish a flat-tailed horned lizard exclusion zone is 0.5 hour per acre of habitat. Surveys will be conducted between April 1 and September 30, when temperatures are between 25° and 37° Celsius. Surveys will not be conducted during inclement weather conditions (e.g., rain, high winds) that could affect the movements of flat-tailed horned lizards. Lizard removal from the area can continue outside of protocol survey periods since the intent is to move animals from harm's way.

e. The barrier fence will be inspected daily by biological monitors from April through September in active construction areas, and every four weeks over that period in other areas for the first year following construction of the fence. If breaks occur in the barrier fence during construction, a minimum of one acre of the adjacent exclusion zone will be resurveyed to remove flat-tailed horned lizards. In following years while construction of the ASH continues, the barrier fence will be inspected in March and July. Additional surveys for flat-tailed horned lizards within established exclusion zones will be conducted

the first spring, April through May, after establishment of the exclusion zone. These removal surveys are to focus on high-quality flat-tailed horned lizard habitat and the area adjacent to the barrier fence, and will include a minimum level of effort of one hour of survey per 10 acres of flat-tailed horned lizard habitat.

f. In areas where only one side of the right-of-way has barrier fencing (e.g., on the Goldwater Range), there is no enclosure fence preventing other flat-tailed horned lizards from entering the area following removal. Therefore, removal surveys will include the area of habitat on Federal lands within 400 yards adjacent to the fence and crossing the right-of-way.

g. Biological monitors may use temporary barrier fencing to isolate areas while exclusion surveys are being conducted to prevent flat-tailed horned lizards from reentering the area. Temporary barrier fencing will include 0.25-inch wire mesh screen held in place with stakes or posts.

h. Removal surveys will be conducted in a manner that prevents flat-tailed horned lizards from reentering construction areas. This will be accomplished specifically through the use of temporary barrier fencing, continuous surveys during the lizard's active period (i.e., surveys conducted seven days a week), and/or resurvey of previously surveyed habitat if continuous surveys could not be accomplished because of inclement weather, etc. If surveys were halted for 1–2 days, 200 yards along the ASH alignment would be resurveyed. If surveys were halted for more than 2 days, 400 yards along the ASH alignment would be resurveyed.

i. The ASH alignment along County 23rd Street between Avenue B and Avenue C will have barrier fencing on both sides of the right-of-way. Intensive flat-tailed horned lizard removal surveys will be conducted within the barrier-fenced right-of-way prior to any ground-disturbing activities, except for fence construction. This area will require a minimum level of effort of at least 0.5 hour per acre.

j. The removal and relocation of flat-tailed horned lizards will be coordinated with MCAS-Yuma biologists. Biological monitors will ensure that all flat-tailed horned lizards requiring relocation will be placed in the shade of a large shrub at least two miles from the site within the Yuma Desert MA, or given to a MCAS-Yuma biologist for release. If surface temperatures in the sun are less than 30° Celsius or exceed 50° Celsius, the monitor will hold the lizard for later release. Captured flat-tailed horned lizards held for later release will be kept in a cloth bag and cooler, or other appropriate clean, dry container from which the lizard cannot escape. Captured lizards will be held at temperatures between 25° and 35° Celsius and will not be exposed to direct sunlight. Release will occur as soon as possible after capture and during daylight hours when surface temperatures range from 32° to 40° Celsius. If such conditions do not occur within 48 hours of capture, the lizard will be transferred to a terrarium containing at least 2 inches of sand from the project area. The terrarium will be maintained at 10° to 20° Celsius until conditions at the site are appropriate for release. Lizards will be allowed to acclimate to higher surface temperatures prior to release. The biological monitors will be

allowed some judgment and discretion to ensure that survival of flat-tailed horned lizards found in the project area is likely.

k. Accurate records will be maintained by biological monitors for each relocated flat-tailed horned lizard, including sex; snout-vent length; weight; temperature; location, date, and time of capture and release; a close-up photo of the lizard; and a photo of the habitat where the lizard was first encountered. A sample of the lizard scat is to be collected, if possible. A Horned Lizard Observation Data Sheet and a Project Reporting Form are to be used and are provided in the RMS. This information is to be included in an annual mitigation report and is also needed for reports submitted to permitting agencies.

l. The contractor will provide an annual mitigation report, prepared by the biological monitors, to ADOT Yuma District and ADOT. ADOT will review and provide comments on the report prior to distribution to Reclamation, BLM, MCAS-Yuma, AGFD, USFWS, and the ICC at the end of each calendar year that project implementation occurs. The annual mitigation report will include completed Horned Lizard Observation Data Sheets and a Project Reporting Form from the RMS; a summary of information regarding the numbers of captured, relocated, and dead flat-tailed horned lizards; and other relevant information associated with the ASH. By the end of the year in which the ASH is completed, a final report that details the results of each mitigation action will be submitted by the contractor. The final report is to include, at a minimum, data on flat-tailed horned lizards captured and relocated, numbers found dead, effects on flat-tailed horned lizard habitat outside of approved areas, and an analysis of the degree of compliance with, and effectiveness of, each mitigation requirement. Documentation of nest searches for birds protected under the Migratory Bird Treaty Act and searches for Peirson's milk-vetch will be included in annual and final reports.

8. General construction activities will be conducted in a manner that minimizes mortality of flat-tailed horned lizards and degradation of habitat.

a. In areas where removal surveys have not been conducted, all ground-disturbing activities on Federal lands (i.e., south of County 14th Street) will be restricted, to the maximum extent possible, to the flat-tailed horned lizard's active period of April through September, when temperatures are between 25° and 37° Celsius, to allow for the location and removal of flat-tailed horned lizards from the area of ground disturbance. The outer boundaries of the work area are to be flagged and/or marked, workers are to be informed to limit ground-disturbing activities to the area within those flagged and/or marked limits, and biological monitors must be present to observe work activities.

b. The timing of ground-disturbing activities is not restricted after the construction area has been isolated from other flat-tailed horned lizard habitat by barrier fencing and biological monitors have cleared the work area of flat-tailed horned lizards, establishing an exclusion zone. From that point on, biological monitors do not need to be present when ground-disturbing work occurs.

c. Existing roads will be used for travel and equipment storage whenever possible, and the number of access roads to the construction site will be kept to a minimum.

d. The use of temporary gates is required for construction equipment to gain access to the right-of-way corridor through the right-of-way fence. These gates will be kept to a minimum and will have a flat-tailed horned lizard barrier securely fastened to the gate. The gate will be constructed such that the barrier remains effective when the gate is shut. When not in use, temporary access gates will be shut to prevent flat-tailed horned lizard from entering the work area. The barrier will consist of 0.25-inch wire mesh that will rest on the ground surface and extend 30 inches above the ground surface.

e. The number of permanent gates installed along the right-of-way for MCAS-Yuma and the U.S. Border Patrol will be determined through coordination with MCAS-Yuma and the U.S. Border Patrol during final design. Once the number of permanent gates and their locations have been determined, ADOT Yuma District will notify ADOT of the locations, and ADOT will contact the ICC to determine whether those access gates warrant fitting with lizard barrier fencing.

f. When not in use during construction of the ASH, permanent access gates installed for MCAS-Yuma and the U.S. Border Patrol will be locked to prevent access by unauthorized personnel into the Yuma Desert MA from the ASH.

g. The contractor is to restrict all ground-disturbing activities, including staging, equipment storage, parking, and other construction related activities, to the ASH right-of-way from which flat-tailed horned lizards have been excluded. For any area of flat-tailed horned lizard habitat that is disturbed and located outside of the right-of-way and not within nonviable, compensated parcels (e.g., between the ASH alignment and the western boundary of the Goldwater Range), the contractor will prepare a habitat restoration plan for ADOT Yuma District, ADOT Roadside Development, and ADOT review and approval, and submission to the land management agency and the ICC. The plan will consider and include, as appropriate, stockpiling and replacement of topsoil, seedbed preparation, fertilization, seeding and transplanting of native species, noxious weed control, and additional erosion control. Restoration will be completed following use of the site and is to include elimination of any hazards to flat-tailed horned lizards created by construction, such as holes and trenches in which lizards might become entrapped.

9. Environmental information/training will be provided for on-site personnel.

a. The contractor, in coordination with the biological monitors, will provide information to all on-site personnel working on the ASH about flat-tailed horned lizards. An environmental orientation program on the flat-tailed horned lizard and the Yuma Desert MA will be prepared by the biological monitor, reviewed and approved by ADOT Yuma District and ADOT, and presented to ASH construction personnel at least once a year in early spring during every year in which ground-disturbing activities occur. This presentation will include, but not be limited to a summary of the biology and status of the flat-tailed horned lizard information on the importance of exercising care within and around the project area to reduce flat-tailed horned lizard mortality, and a summary of protection measures included in the project specifications that are designed to reduce potential impacts to the species.

b. All on-site personnel will be instructed that ground-disturbing activities on Federal land are restricted to areas from which flat-tailed horned lizards have been excluded, which are demarcated with lizard barrier fencing or flagging, and/or specially marked areas where biological monitors are present to observe work activities.

c. The contractor will provide biological monitors with contact information for the ADOT Engineer and ADOT. A biological monitor is to be notified by the contractor or ADOT personnel if workers encounter a flat-tailed horned lizard in the field.

d. Wallet-sized cards summarizing flat-tailed horned lizard information in English and Spanish will be developed by the biological monitors and provided to all on-site personnel following review and approval by ADOT Yuma District and ADOT.

10. Signs will be provided by ADOT to communicate information on the flat-tailed horned lizard and management restrictions in the Yuma Desert MA to persons entering the area from the ASH.

a. ADOT will provide and place "No Trespassing" signs on the ASH right-of-way fence within the Goldwater Range. ADOT will coordinate with MCAS-Yuma during the ASH design phase regarding the design, message, number, and location for the signs, and will submit the sign specifications to ADOT Roadside Development Section for review. At least one sign will be placed every mile and at each intersection or gate in the right-of-way fence. Signs will be in place prior to opening the ASH to traffic, and signs will be maintained and replaced, as necessary, by ADOT. These signs may alternate with Management Area signs, as appropriate.

b. ADOT will provide and place signs identifying the Yuma Desert MA on the ASH right-of-way fence adjacent to the MA. ADOT will coordinate with Reclamation and MCAS-Yuma during the ASH design phase regarding the design, message, number, and location of the signs, and will submit the sign specifications to the ADOT Roadside Development Section for review. At least one sign will be placed every mile and at each intersection or gate in the right-of-way fence. Signs are to be in place prior to opening the ASH to traffic and signs will be maintained and replaced, as necessary, by ADOT. These signs may alternate with the "No Trespassing" signs on the BMGR, as appropriate.

c. ADOT will provide one or more signs to be placed adjacent to the Yuma Desert MA to provide regulatory information about the MA (e.g., vehicles restricted to existing roads, speed limits within the MA) and basic information about the flat-tailed horned lizard to persons entering the MA. ADOT will coordinate with Reclamation and members of the ICC during the ASH design phase regarding the design, message, and placement of this sign. The sign(s) will be in place prior to opening the ASH to traffic along the County 23rd Street alignment. The ADOT Roadside Development Section will review the sign specifications prior to final placement of the sign(s).

11. Research will be conducted that will improve management in the future.

FHWA has provided funding for a research study on flat-tailed horned lizard use of

highway underpass crossing structures and an evaluation of factors that may influence crossing structure use (e.g., design, size, lighting). This study is managed through agreements with FHWA, ADOT, and AGFD. The research study is coordinated with the ICC and was initiated by AGFD in the 2005 field season.

STATUS OF THE SPECIES

The flat-tailed horned lizard is a small, cryptically colored, phrynosomatid lizard restricted to flats and valleys in the western Sonoran Desert, including the Coachella, Borrego, and Imperial valleys in California; the Yuma Desert in extreme southwestern Yuma County, Arizona; and adjacent portions of Baja California Norte and Sonora, Mexico (Funk 1981, Johnson and Spicer 1985, Rodriguez 2002). On November 29, 1993, we published a rule in the Federal Register proposing the flat-tailed horned lizard as a threatened species without critical habitat (58 FR 62624-62629). The proposed rule was withdrawn in a Federal Register notice dated July 15, 1997. However, on July 31, 2001, the 9th Circuit Court of Appeals remanded the withdrawal back to us for further consideration. In a Federal Register notice dated December 26, 2001, we reinstated the proposed rule (66 FR 66384-66385); however, we again found that listing was not warranted and withdrew the proposed rule on January 3, 2003 (68 FR 331-348). In an order from the Arizona District Court, the 2003 withdrawal was set aside on August 30, 2005. Hence the flat-tailed horned lizard is currently proposed as a threatened species without critical habitat.

In Arizona, the range of this species is approximately bounded by the Gila River on the north, urban and agricultural development at Yuma and along the Colorado River on the west, and to the east by bajadas and relatively coarse, alluvial, granitic soils immediately west of the Gila and Butler mountains (Rorabaugh *et al.* 1987, Hodges 1995). In this area, most records for the species are from areas of fine, often windblown, silica sand dominated by sparse stands of white bursage (*Ambrosia dumosa*), creosote (*Larrea tridentata*), and galleta grass (*Hilaria rigida*) (Rorabaugh *et al.* 1987, Hodges 1995). The species shows a preference for and may be more abundant on sandy substrates as compared to desert pavement or hardpan surfaces (Muth and Fisher 1992, Rorabaugh *et al.* 1987), and in Arizona is most often found in areas of silica sand, rather than granitic sands and gravels (Hodges 1995).

In California, the remaining strongholds for the species are in East Mesa (west of the Algodones Dunes), West Mesa (west of El Centro and north of I8), Yuha Basin (southwest of El Centro and south of I8), and in the northeastern portions of Anza Borrego Desert State Park. Additional populations occur in extreme eastern San Diego County, elsewhere in Imperial County, and in remnant desert scrub in the Coachella Valley, Riverside County. The species occurs in Baja California Norte outside of agricultural and urbanized areas from about 40 miles south of Laguna Salada north to the international boundary and also in remaining desert scrub in extreme northeastern Baja (Grismer 2002, Rodriguez 2002, Flat-tailed Horned Lizard Interagency Coordinating Committee 2003). In Sonora, the lizard occurs in the Gran Desierto and Pinacate region south and east to Bahia San Jorge (Rodriguez 2002, Flat-tailed Horned Lizard Interagency Coordinating Committee 2003).

Threats to the flat-tailed horned lizard include documented and anticipated population declines

and loss of habitat associated with widespread habitat loss, fragmentation, and degradation due to human activities such as agricultural and urban development, off-highway vehicle use by recreationists, illegal immigrants and smugglers, and associated law enforcement; energy developments, particularly wind turbines in the Coachella Valley and geothermal development in the Imperial Valley and Baja California Norte; sand and gravel mining; cattle grazing in Sonora; construction of roads and canals; and military activities (U.S. Fish and Wildlife Service 1993, Flat-tailed Horned Lizard Interagency Coordinating Committee 2003). Based on a 1997 analysis, roughly 48.6 percent of the historical habitat of the flat-tailed horned lizard in the United States had been converted to other uses, particularly urban development and agriculture, and by filling of the Salton Sea (Hodges 1997). Remaining habitats are threatened by continued habitat conversion, off-road vehicles, pesticide applications, and invasion of nonnative plants. Aerial insecticide applications in flat-tailed horned lizard habitat to control an agricultural pest may have reduced ant populations in some areas of California; ants are the primary prey of the flat-tailed horned lizard (Turner and Medica 1982, Bolster and Nicol 1989, U.S. Fish and Wildlife Service 1993). However, aerial spraying on BLM lands has been discontinued (Foreman 1997). Invasion of nonnative plants, such as split grass (*Schismus barbatus*) and Sahara mustard (*Brassica tournefortii*) may alter the prey base of the flat-tailed horned lizard. Stem densities of these species can also become dense enough to perhaps impede the movement of flat-tailed horned lizards. Furthermore, nonnative plants can carry fire that eliminates native shrubs (Foreman 1997). A fire in the early 1990s burned 3,500 acres of horned lizard habitat in East Mesa, California.

From 1994 to 1997, representatives from 10 State and Federal agencies worked with herpetologists to develop a comprehensive conservation strategy for the lizard. The agency representatives comprised the Flat-tailed Horned Lizard Rangewide Strategy Working Group The Working Group was responsible for preparing the strategy with the help of the Flat-tailed Horned Lizard Conservation Team. The Conservation Team was composed of conservation biologists and herpetologists familiar with the flat-tailed horned lizard. A draft conservation strategy was completed and made available for public comment in January 1997. The strategy was finalized (Foreman 1997), and a conservation agreement was signed in June 1997, committing signatory agencies to implementation of the strategy. Agencies signing the agreement included the Fish and Wildlife Service (Regions 1 and 2), Bureau of Land Management (Arizona and California), Bureau of Reclamation (Lower Colorado Region), MCAS - Yuma, El Centro Naval Air Facility, Arizona Game and Fish Department, California Department of Fish and Game, and California Department of Parks and Recreation (Rorabaugh *et al.* 2000). The conservation strategy was considerably updated and revised in 2003 (Flat-tailed Horned Lizard Interagency Coordinating Committee 2003).

The purpose of the agreement and strategy is to maintain viable populations of flat-tailed horned lizards in five management areas (MAs), including the Yuma Desert MA in Yuma County, Arizona; and the East Mesa, West Mesa, Yuha Desert, and Borrego Badlands MAs in Imperial and eastern San Diego counties, California. The strategy also called for managing areas in the Coachella Valley that are capable of maintaining self-sustaining populations of lizards. These MAs range in size from 42,400 to 136,100 acres and total 485,200 acres. The Yuma Desert MA is 131,000 acres. Also established was a research area at the Ocotillo Wells State Recreational

Vehicle Area in California where research on the effects of human activities and other studies of the lizard would be supported. The strategy's format was that of a Fish and Wildlife Service recovery plan. It included an introductory section summarizing the biology, status, threats, and current management of the species, followed by a management goal and objectives, planning actions, and an implementation schedule that identified each task needed to meet the management goal, parties responsible for implementing tasks, schedules, and cost estimates. The strategy also included standard mitigation and compensation formulas and survey protocols that all signatory agencies would use, and suggested techniques for restoration of degraded flat-tailed horned lizard habitat (Flat-tailed Horned Lizard Interagency Coordinating Committee 2003).

Key planning actions included establishing the MAs and, within MAs, limiting cumulative new disturbance to one percent of each MA, limiting vehicle use to designated routes only, reducing route densities, acquiring inholdings, increasing law enforcement and public education, rehabilitating degraded habitats, prohibiting competitive recreational events, prohibiting long-term camping, and prohibiting use of pesticides. The planning actions also included research needed to promote conservation of the lizard and its habitat, inventory and monitoring of horned lizard populations and habitats, and maintenance of habitat corridors between MAs. A technical team (the Interagency Coordinating Committee [ICC]) and a management team (the Management Oversight Group [MOG]), modeled after similar groups for the desert tortoise, coordinate and track implementation of the strategy.

The ICC compiles an annual report that tracks implementation of the strategy. Compliance with the strategy has been very good, thus far; particularly in regard to establishing MAs, regulating recreation and pesticide use, mitigation and compensation of project impacts, conducting research, monitoring of habitat conditions, and acquiring inholdings in Arizona. Plans are in place or in preparation to fully implement the strategy, and the ICC and MOG meet regularly. Off-road vehicle activity by the Border Patrol and illegal immigrants and smugglers is an increasing problem in several MAs. Coordination between BLM and Border Patrol as well as infrastructure along the border have reduced this problem in California. A vehicle barrier planned on the border across the Yuma Desert should greatly reduce off-road vehicle use in the Yuma Desert MA. Monitoring of populations in the MAs has begun, but as yet there are not enough data to determine long-term trends.

Further information on the range, biology, and ecology of the flat-tailed horned lizard can be found in Norris (1949), Mayhew and Wright (1971), Turner *et al.* (1980), Turner and Medica (1982), Rorabaugh *et al.* (1987, 1994, 2000), Muth and Fisher (1992), Hodges (1997, 1995), Beauchamp *et al.* (1998), Wright (2002), Sherbrooke (2003), Wright and Grant (2002, 2003), Wone and Beauchamp (1995, 2003), Young *et al.* (2004), and Young and Young (2000, 2005).

ENVIRONMENTAL BASELINE

The environmental baseline includes past and present impacts of all Federal, State, or private actions in the action area, the anticipated impacts of all proposed Federal actions in the action area that have undergone formal or early section 7 consultation, and the impact of State and private actions which are contemporaneous with the consultation process. The environmental

baseline defines the current status of the species and its habitat in the action area to provide a platform to assess the effects of the action now under consultation.

A. Status of the species within the action area

The action area is considered to be the ASH route (Figure 1), parcels of flat-tailed horned lizard habitat adjacent to the route (see parcels 2-4, Figure 2), and lands between the ASH and the international boundary. Logan Simpson Design (2002) report that "between August 21 and September 8, 1995, Southwestern Field Biologists conducted thirty 0.5-mile transects for the flat-tailed horned lizard within the project area. During these surveys, four flat-tailed horned lizards were found (Southwestern Field Biologists 1995). In 1999, BOR biologists detected four lizards during surveys conducted south of the project area. In addition, Logan Simpson Design Inc. (LSD) biologists detected three live flat-tailed horned lizards, a deceased individual, and evidence of other individuals in the form of scat during surveys conducted along Avenue E just south of Juan Sanchez Boulevard in October 2000 (Logan Simpson Design 2000)." Within a one mile swath along the center line of the ASH (Figure 1), we are aware of 36 other records for the species within the action area:

County 23rd from Ave E to Avenue B: Eight lizards, six of which were road kills on paved portions of County 23rd or Avenue B.

County 23rd from Avenue B to Avenue 4E: 20 lizards, only two of which were road kills.

Goldwater Range: Two lizards, neither of which were road kills

County 14th to Interstate 8: Six lizards, one which was a road kill on an unpaved section of Avenue 6E.

These records are found in our files in Phoenix, Rorabaugh *et al.* (1987), Hodges (1997), and Rorabaugh (1994). In addition to these observations of lizards, Rorabaugh *et al.* (1987) conducted transects for flat-tailed horned lizards throughout the Yuma Desert, including most sections along the ASH route from Ave E to Ave 4E and scattered sections elsewhere along the route. Horned lizard scat or horned lizards were found on most of those transects. Only flat-tailed horned lizards have been found in the vicinity of the ASH route (not desert horned lizards, *Phrynosoma platyrhinos*), so in this area presence of horned lizard scat indicates presence of flat-tailed horned lizards. Young and Young (2005) established plots along the ASH right-of-way along County 23rd from Avenue C to 4E and then north along Avenue 4E to about County 19th. Other plots were established elsewhere in the Yuma Desert. Although they did not report specific localities, they found horned lizards at 25 percent of the plots. Presence based on scat, tracks, and suitable habitat or captures of lizards was in evidence on 58 percent of the plots. These records of scat and lizards, and the presence of suitable habitat, albeit sometimes highly disturbed, suggests the lizard exists throughout the action area, except where habitat has been destroyed by agriculture, the State Prison, paved roads, and other similar disturbance. This analysis is similar to that presented by the project proponent in their biological assessment (Logan Simpson Design 2002).

The density or abundance of horned lizards along the route or in the action area is unknown. However, other studies in Arizona and California have demonstrated densities ranging from 0.3 to 11.4 lizards per hectare (0.1-4.6 per acre, see review in Wright and Grant 2003). Rorabaugh (1994) attempted to evaluate density of flat-tailed horned lizards at two plots just north and south of County 23rd, and just east of Avenue D within the ASH right-of-way. Recaptures were inadequate to determine absolute density, but the author found that minimum density was 0.6 lizards per hectare (0.2 per acre) on the south plot. Working nearby on the Goldwater Range, Young and Young (2000) found densities ranging from 1-4 lizards per hectare (0.4-1.6 per acre). In an attempt to quantify the total number of flat-tailed horned lizards in the Yuma Desert MA, Young *et al.* (2004) conducted trapping web and mark-recapture at numerous locations within the MA. Estimated mean densities for the MA were 0.308 and 0.389 per hectare (0.1250.156 per acre) -based on trapping web and mark/recapture data, respectively. Best estimates of the population within the MA was 16,328 (trapping web) and 20,622 (mark/recapture).

Highways typically promote development along their routes; the ASH is designed as a controlled access facility with no public access off or onto the highway. Even if such access is allowed in the future, we anticipate no increased access to key flat-tailed horned lizard habitats in the Yuma Desert MA because of Federal ownership of all lands in the MA and commitments by the land managers (Bureau of Reclamation and MCAS-Yuma) to protect these lands for the flat-tailed horned lizard. Future access to other flat-tailed habitat along the ASH route could potentially occur in the future, but these lands are largely private or State lands, and are already developed or are likely to be developed in the future, regardless of the ASH. Some of these areas would be affected by fragmentation due to the ASH, and thus may be lost as viable habitat before any development occurred.

The vegetation community in which the proposed project would be constructed is the lower Colorado River Valley subdivision of Sonoran Desert scrub (Turner 1982). It is the largest and most arid subdivision of Sonoran Desert scrub. Dominant perennial plant species in the more xeric examples of this vegetation community, such as at the project site, include creosote, white bursage, and galleta grass (Turner 1982).

B. Factors affecting species' environment within the action area

A general listing of threats that have contributed to the declining status of the flat-tailed horned lizard and that ultimately triggered the proposed listing of the species as threatened is presented in the section entitled "Status of the Species". These threats are primarily human-caused factors.

In the Yuma Desert west and north of the Goldwater Range, numerous proposed or ongoing activities threaten the habitat of the flat-tailed horned lizard. Federal actions that have affected the species over the last two decades include construction of a desalinization sludge disposal facility, an Arizona State Medium Security Prison on the southeastern corner of County 23rd and Avenue B, paving of County 23rd and Avenue B, development of a Yuma County Administrative Center, and rights-of way for roads and utilities. Bureau of Reclamation maintains a sludge

disposal facility, a feature of their Colorado River Salinity Control Project, approximately one mile north of the intersection of County 23rd and Avenue B. The City of Yuma has a waste water sludge disposal facility in T11S, R23W, SE1/4 section 5, immediately north of the proposed ROW along County 23rd. The waste water site was apparently graded at some time in the past, but the vegetation is recovering. A landfill has been proposed along County 23rd east of its intersection with Avenue D. A new border crossing is under construction in flat-tailed horned lizard habitat near San Luis. On the Goldwater Range, military activities that adversely affect the species are relatively few and small in areal extent. Military activities affecting this species were the subject of a biological/conference opinion (U.S. Fish and Wildlife Service 1996).

Border Patrol and illegal activities along the border in the Yuma area have increased dramatically over the last decade, and much of the habitat along the border has been impacted by off-road-vehicle activity. During surveys in 2002, Rorabaugh *et al.* (2002) found that vehicle tracks covered 2.86 and 3.36 percent of the surface area on the Goldwater Range and Bureau of Reclamation portions of the Yuma Desert MA, respectively. This was relatively low compared to BLM California MAs, which ranged from 4.8-11.4 percent coverage with vehicle tracks (Wright 2002). However, illegal activity has increased significantly since 2002, the Yuma Sector of the Border Patrol is now the busiest sector in the Nation, and they are increasing staff from 300 to 800 agents. Thus, we expect that percent cover by vehicle tracks is greater now. The presumed effects of off-road vehicle activity include habitat degradation and direct mortality of lizards. However, the level of vehicle activity at which populations of lizards decline is unknown. Wright and Grant (2003) suggest this threshold is nine percent coverage by vehicle tracks, but their analysis is complicated by other factors that may affect populations. Border Patrol has proposed a wall from San Luis to Avenue C and a vehicle barrier along the border from Avenue C to the Tinajas Altas Mountains that should dramatically reduce illegal vehicle activity and associated law enforcement. However, it will likely be several years before the wall and barrier are completed. On State and private lands in the northern Yuma Desert, habitat continues to be developed for agriculture. The habitat north of the Goldwater Range in the Foothills area is rapidly being lost to housing developments. Habitats on the Goldwater Range are the least disturbed of the Arizona portion of the lizard's range. The public is prohibited from entering that portion of the Goldwater Range that supports flat-tailed horned lizards. As of 1997, approximately 31.1 percent of the historical habitat in Arizona had been converted to other land uses, with agriculture (17.5 percent) and urban development (11.1 percent) accounting for most of the habitat conversions (Hodges 1997). Flat-tailed horned lizards have been affected not only by direct habitat loss, but by edge effects near human disturbance. Young and Young (2005) found that lizard populations can be significantly reduced for at least 1,475 feet from urban or agricultural development, likely due to predation. Grant *et al.* (2001) found 87 percent fewer lizards within 0.45 mile of Highway 98 in California, as compared to areas farther from the highway. This is likely due to mortality on the highway.

The location of the proposed ASH on the Goldwater Range (segment 2 of the project) is in relatively undisturbed flat-tailed horned lizard habitat (nine miles). In contrast, areas outside the Goldwater Range that would be disturbed by the ASH are largely already highly disturbed by the presence and use of a paved road (County 23rd or Juan Sanchez Boulevard) from the western end of the project to Ave B (four miles), and a dirt route and adjacent development along Avenue E

(segment 1). From Avenue B east to Ave 4E the route of the highway follows the mostly dirt track of County 23rd. For a mile east of Avenue B, the ASH will adjoin the northern boundary of the State Prison. North of the Goldwater Range (segment 3), the ASH will traverse desert scrub that has been disturbed to some degree by a mix of recreational, urban, and agricultural development, although significant habitat still remains in this area for the lizard.

In summary, urban and agricultural development is responsible for loss of at least 31.1 percent of the flat-tailed horned lizard's habitat in Arizona. Remaining habitats are threatened by a variety of human activities; however, as described in the Status of the Species, a multi-agency conservation agreement and strategy protects 131,000 acres of habitat in Arizona as the Yuma Desert MA. Continued implementation of the conservation strategy by the parties to the agreement, combined with construction of walls and vehicle barriers to restrict illegal activities in the borderlands, are expected to allow persistence of the flat-tailed horned lizard in the long term in Arizona.

EFFECTS OF THE PROPOSED ACTION

"'Effects of the action' refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action" (50 CFR 402.02). "Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration" (50 CFR 402.02).

Effects of the action can be categorized as direct (directly caused by and contemporaneous with project activities) or indirect (caused by the action, reasonably certain to occur, but which occur later in time). Effects can also be categorized as to whether they are caused by construction, subsequent use, or maintenance of the ASH. All categories of effects may affect individual flat-tailed horned lizards and/or the lizard's habitat.

Construction

Direct Effects

Habitat loss will occur as a result of road construction and equipment/materials storage and staging areas. Throughout flat-tailed horned lizard habitat, these activities will be restricted to the fenced right-of way (typically 240-280 feet wide), in which we assume that all habitat will be lost. The conservation measures include a provision for restoration of any viable habitat disturbed outside of the right-of-way, but no activities are proposed in such areas, and we assume that such disturbance would occur incidentally to construction activities and would be minimal in size, if it occurs at all.

Although some creosote scrub will remain within the right-of-way, it will be lost as habitat to the lizard because of road mortalities, barrier fencing, and removal of lizards prior to and during construction activities. Construction of the ASH would result in the direct and permanent loss of approximately 623 acres of FTHL habitat within the highway right-of-way on lands under the jurisdiction of agencies that are signatories to the Conservation Agreement; approximately 289

acres are within the Goldwater Range and approximately 334 acres are on Reclamation-administered lands. Excluded from this calculation are those portions of the right-of-way that have been previously paved or graded (Arizona Department of Transportation and Federal Highway Administration 2005). We estimate that another 80 acres of habitat managed/owned by those not a party to the Conservation Agreement (e.g. private parties and Arizona State Land Department from County 14th north to the A Canal, and City of Yuma Lands at the landfill site) will be lost, as well. This estimate does not include lands along Avenue E, which have already been mitigated and compensated for and are expected to be lost due to construction of the new Port of Entry before they are impacted by the ASH. An estimated additional 24 acres of potential habitat north of the A Canal would be lost, but it is unknown if flat-tailed horned lizards still occupy this fragmented and isolated habitat parcel.

All flat-tailed horned lizards occupying the right-of-way are at risk of injury or mortality due to construction activities. One of the lizard's best defenses against predators is to sit motionless and depend upon its formidable abilities to blend with its environment and allude detection. Although this works well for humans and presumably coyotes and other predators, it does not serve the lizard well where vehicles and heavy equipment are involved (see above listing of flat-tailed horned lizards in the right-of-way, nine of 36 or 25 percent of which were road kills). Many flat-tailed horned lizards in construction areas, or where construction vehicles travel, are likely to be killed. FHWA and ADOT propose removal surveys to find and relocate flat-tailed horned lizards within the right-of-way, which will reduce mortality. Among the conservation measures are also many activities to minimize impacts to lizard habitat and inform construction workers of conservation measures and the need to protect the lizard. However, flat-tailed horned lizards are difficult to find, even by experienced observers, and it is likely that many animals will remain undetected and will be killed or injured during construction.

If we use the mean density of lizards from the trapping web and mark/recapture data in the Yuma Desert MA calculated by Young *et al.* (2004) (0.348 lizards per hectare, or 0.139 per acre), then we can estimate the number of lizards at risk. If the 24 acres north of the A Canal is not habitat, then 98 flat-tailed horned lizards (703 acres X 0.39 lizards per acre) are at risk within the right-of-way. Adding in the 24 acres would add another three lizards. These numbers should be considered rough estimates at best, as densities of lizards likely vary significantly both spatially and temporally.

Operation of the Road

Direct Effects

When open to the public, flat-tailed horned lizards will continue to be killed by passing vehicles where the right-of way adjoins occupied habitat and a lizard barrier fence does not separate the right-of-way from that habitat. This scenario will occur on both sides of the ASH north of County 14th to at least the A Canal (~1.5 miles). Another ~0.75 mile of unfenced habitat may occur north of the A Canal. On the Goldwater Range, the ASH will not be barrier fenced on its west side where habitat occurs (nine miles). From the western boundary of the Range (Ave 4E) to Avenue C (six miles), the ASH will not be fenced on its northern edge, where occupied habitat occurs. In total, an estimated 16.5-17.2 miles will have one or both sides of the right-of-way

unfenced and open to occupied habitat outside of the right-of-way. In these areas, flat-tailed horned lizards will be subject to road mortality.

Indirect Effects

Roads can act as mortality sinks for small animals (Boarman *et al.* 1992, Rosen and Lowe 1994). Over a four-year period, mortality along a 27.4-mile section of Route 85 in southern Arizona, Rosen and Lowe (1994) recorded mortality of snakes equivalent to the estimated snake population in a 1.93 mi^2 area. They also found this to be equivalent to eliminating all snakes within 213 feet of the road. In the Yuha Desert MA, Grant *et al.* (2001) found 87 percent fewer flat-tailed horned lizards within 0.45 mile of Highway 98 than in areas farther from the road. Highway 98 probably has traffic loads similar to what is expected on the ASH. Thus, the road will act as a sink for lizard populations outside of the right-of-way where a barrier fence is absent.

Parcels 2, 3, and 4 (Figure 2) all border the ASH route and will not have barrier fencing between them and the highway. Barrier fencing on the other side of the ASH will effectively isolate the lizard populations from the MA. In addition, these parcels all border agriculture, which Young and Young (2005) found also acted as a mortality sink. Populations were significantly reduced for at least 450 meters from the agricultural edge. Avenue B, rural development, and other roads create additional threats within or on the edges of these parcels. Based on these threats, and observations that flat-tailed horned lizards do not persist on small, isolated parcels in the Yuma area or in the Coachella Valley, the ICC concluded that parcels 2, 3, and 4 would not remain as viable, occupied flat-tailed horned lizard habitat in the long term. Even with barrier fencing to prevent highway mortality, the ICC believed these parcels were too small and threatened by other activities to remain as viable habitat. Culverts are potentially a tool to retain connectivity to the population in the MA, but culverts have not been tested with this species and we do not know if the lizard would use them. As a result, the ICC suggested that the habitat within these parcels be considered lost as a result of the ASH and that in accordance with the Conservation Strategy, FHWA/ADOT pay compensation for the loss of the habitat. We concur with this analysis. As described in the Description of the Proposed Action, FHWA/ADOT proposes monetary compensation for the parcels (3,654 acres). If the southern half of the Yuma Landfill site can be relocated north of the ASH, then FHWA/ADOT will receive credit for 328 acres.

If we assume similar densities of lizards in parcels 2, 3, and 4 as in the Yuma Desert MA (Young *et al.* 2004), then the 3,654 acres would support roughly 508 flat-tailed horned lizards. This population would, over time, be depleted due to mortality on the ASH, mortality associated with adjacent agriculture, other roads, urban development, etc. until those populations were extirpated. The loss of these populations would probably take many years, but could occur much faster if habitat were lost to development or impacted by other activities.

From County 14th north to I-8, the road would also serve as a mortality sink, but connectivity would still be maintained across the road because no barrier fences would be constructed. If flat-tailed horned lizards still occur north of the A Canal, the mortality sink along the ASH would likely hasten the extirpation of the lizards in that area. South of the A Canal, although the ASH would reduce populations, the area would still be connected to the MA across County 14th and

would likely maintain a flat-tailed horned lizard population as long as the habitat remains extant. Some number of horned lizards would be killed on the ASH each year into the foreseeable future, or until the population was lost to development.

Maintenance

Direct Effects
Periodic maintenance of the roadway or the road shoulder could result in occasional mortality or injury of horned lizards in areas described above when and where lizards are expected to occur within the right-of-way. During resurfacing of roadways, lizards and other small animals may become entrapped in drying asphalt or on oiled surfaces, or crushed by maintenance equipment or vehicles. Regrading of road shoulders could result in crushing of animals in burrows or on the surface. As populations are reduced or extirpated adjacent to the ASH, numbers of lizards directly affected by these activities will gradually decline.

Other Indirect Effects

The ASH, and particularly the conservation measures, will precipitate a number of other effects, many of which will be beneficial to the lizard and its conservation. The ASH was first conceived in the 1980s and was considered during the development of the lizard's Conservation Strategy in 1994-1997. Management action 2.2.4 in the 1997 version of the Strategy stated that the ASH would be outside of the Yuma Desert MA and that this and any other roads built along the boundary of the MA would include fencing to reduce access to the MA and reduce lizard mortality. It was thought that the ASH could help form an effective barrier to public access and potential off-road vehicle use along the northern and western boundaries of the MA. Currently it is relatively easy for vehicles to drive off of County 23rd, Avenue 4E, and other routes in the area into the MA. Highway traffic, the right-of-way fence (a barbed wire fence), and locked gates across the occasional access roads, and regulatory signing will make such incursions less feasible. Compensation funds obtained for habitat lost outside the MA would also assist with land acquisition in MAs and potentially other management actions. In this case, an estimated $2.8 million in compensation funds will be transferred to the Bureau of Land Management or a third party for acquisition of lands within California MAs (no non-Federal lands occur within the Yuma Desert MA), which would then be managed by the Bureau of Land Management in accordance with the Strategy. The funds would be enough to purchase 4,277 acres (minus 328 acres, if FHWA/ADOT is successful in bringing the southern half of the Yuma Landfill site into the Yuma Desert MA). These lands would otherwise be available for development, which could fragment or impair the integrity of California MAs. At their September 21, 2005, meeting, the MOG decided to hold in an account 40 percent of the compensation funds while the ICC develops a list of other potential uses of the funds consistent with the Strategy. If not used for these other purposes, they would be used for land acquisition.

The conservation measures include posting "No Trespassing" signs at least every mile and at gates/intersections on the border with the Goldwater Range (nine miles). These signs should further deter illegal access into the Yuma Desert MA. Along the entire boundary with the MA, and at least every mile but also at gates/intersections, signs identifying the Yuma Desert MA will

be placed on the right-of-way fence. These signs will help the public understand the location and boundaries of the MA. One or more interpretive signs will also be placed adjacent to the Yuma Desert MA to provide regulatory information about the MA (e.g., vehicles restricted to existing roads, speed limits within the MA) and basic information about the FTHL to persons entering the MA. In total, these signs will help strengthen the boundaries of the MA and public understanding and need for regulations in the MA.

The ASH could become a popular route for illegal smuggling of immigrants, drugs, or other materials from Mexico. A wall with lights and roads is under construction along the border from San Luis to Avenue C, which should be a strong deterrent to smugglers in that area. Construction of a vehicle barrier from Avenue C east to the Tinajas Altas Mountains will begin soon. When completed, that barrier will stop most drive throughs from Mexico Highway 2 to the ASH, but smugglers could still drive off of the ASH to the border (only 2.5 miles south at Avenue D), make a pick up, and then drive back onto the ASH. The barbed wire right-of-way fence would likely be a minor deterrent to smugglers. However, currently County 23rd likely serves as a smuggling route, much the same as the ASH will in the future. Measured from this baseline, we would expect vehicle traffic across the MA due to smugglers going back and forth from the border to the ASH to decline over the current situation due to 1) the vehicle barrier and wall along the border, 2) a maintained right-of-way fence and locked gates, and 3) high speeds long the ASH.

Summary of Effects in the Context of the Status of the Species

We estimate that roughly 4,357 acres of flat-tailed horned lizard habitat will be lost as a result of the project. All flat-tailed horned lizards (roughly 606) within those habitats would be lost as well due to direct construction activities, road mortality during operation and maintenance of the ASH, or isolation and subsequent extirpation of the population. These losses compare to 131,000 acres within the Yuma Desert MA and 485,000 acres within all MAs in California and Arizona (Flat-tailed horned lizard Interagency Coordinating Committee 2003). Hodges (1997) estimated a total of 1.243 million acres of flat-tailed habitat remained in California and Arizona. The 4,357 acres lost as a result of the ASH represents 0.35 percent of that total. The Flat-tailed horned lizard Interagency Coordinating Committee (2003) estimated that about half of the historical range of the flat-tailed horned lizard is in Mexico, with most of that in Sonora (see Figure 2 of that document). The Flat-tailed horned lizard ICC (2003) believed viable populations of the flat-tailed horned lizard could be maintained in the long-term in each MA so long as the conservation strategy was implemented. The ASH does not impact the Yuma Desert MA except indirectly in that it may help form an effective barrier through construction and maintenance of a right-of-way fence, plus regulatory and interpretive signing. Compensation funds obtained for loss of habitat will be used to acquire lands in California MAs and possibly to accomplish management to benefit the MAs and conservation of the flat-tailed horned lizard.

Cumulative Effects

Cumulative effects are those impacts of future non-Federal (State, local government, and private) actions that are reasonably certain to occur in the project area. Future Federal actions will be

subject to the consultation and conferencing requirements established in section 7 of the Act and, therefore, are not considered cumulative to the proposed project.

The primary cumulative effects in the action area are due to illegal immigration and smuggling of immigrants and drugs from Mexico. The Yuma Sector of the Border Patrol is the busiest section in the Nation and is increasing its number of agents from 300 to 800 in response to these activities. Illegal vehicle traffic, which typically occurs off road, is particularly damaging to habitat and results in mortality of lizards. As discussed, the presence of the ASH may attract or facilitate illegal vehicle traffic between the border and the ASH. But in the future, with a vehicle barrier along the border east of Avenue C, a wall west of there, and with a maintained right-of-way fence and high speed travel on the ASH, these types of incursions are likely to decline over the current situation on County 23rd. Occasional illegal off-road vehicle activity also occurs by recreationists in the action area. This activity is also expected to decline in the Yuma Desert MA, as the ASH and its right-of-way fence will provide a significant barrier between the urbanized areas of Yuma and the MA. Some illegal recreational vehicular activity will probably continue from the Foothills area into the area east of ASH on the Goldwater Range, but MCAS-Yuma has stepped up enforcement in this area, hence this may decline in the future, as well.

CONCLUSION

After reviewing the current status of the flat-tailed horned lizard, the environmental baseline for the action area, the effects of the proposed ASH and the cumulative effects, it is our conference opinion that the ASH, as proposed, is not likely to jeopardize the continued existence of the flat-tailed horned lizard. No critical habitat has been proposed for the species, thus none will be affected. Our rationale for this conclusion is summarized here:

1) A relatively small portion of habitat remaining in the U.S. for this species (0.35 percent) would be lost as a result of the project, and likely half or more of the extant habitat range-wide occurs in Mexico.

2) The MAs were identified as the key habitats in the U.S. for the flat-tailed horned lizard by the Flat-tailed horned lizard Interagency Coordinating Committee (2003), and the ASH and most of its effects lie outside the MAs. Some benefits will accrue to MAs in terms of signing and creation of an effective barrier along the Yuma Desert MA, acquisitions of lands within California MAs, and possibly other management actions to benefit the MAs.

3) The proposed action conforms to the mitigation and compensation prescriptions in the conservation strategy for the lizard. These prescriptions include extensive and comprehensive conservation measures to minimize effects of the action on site to the maximum extent reasonable, and then to provide monetary compensation for any residual impacts. If the strategy is implemented, the Flat-tailed Horned Lizard Interagency Coordinating Committee (2003) and we believe that viable populations of flat-tailed horned lizards can be maintained in the long-term in all MAs. The Yuma Desert MA was designed by the ICC to include the ASH on its northern and western boundary and still remain a viable reserve for the lizard.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is defined (50 CFR 17.3) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. "Harass" is defined (50 CFR 17.3) as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. "Incidental take" is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by FHWA so that they become binding conditions of any grant or permit issued, as appropriate, for the exemption in section 7(o)(2) to apply. FHWA has a continuing duty to regulate the activity covered by this incidental take statement. If FHWA (1) fails to assume and implement the terms and conditions or (2) fails to require the (applicant) to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, FHWA must report the progress of the action and its impact on the species to the FWS as specified in the incidental take statement. [50 CFR §402.14(i)(3)].

AMOUNT OR EXTENT OF TAKE

We anticipate flat-tailed horned lizards will be taken incidental to the construction, operation, and maintenance of the ASH in the following forms:

Construction Activities:
A total of 100 flat-tailed horned lizards, mostly due to direct mortality as animals are at risk of being run over or otherwise crushed by construction equipment and activities. Some flat-tailed horned lizards (estimated 30 to 100) will be captured and relocated in accordance with the conservation measures.

Operation of ASH:
As described in the Effects of the Action, flat-tailed horned lizards that survive the construction phase will be killed on the ASH by passing vehicles where absence of lizard barrier fencing allows their entry onto the highway. This mortality will occur in two ways:

Depletion and extirpation in the isolated parcels: In parcels 2, 3, and 4, as populations are depleted by road mortality and other activities unrelated to the ASH on and near these parcels,

the populations in these parcels are expected to be extirpated. Extirpation could be facilitated by the ASH in an isolated parcel north of the A Canal, as well, if lizards still inhabit that site. In isolated parcels, some lizards would fall victim to heightened predation adjacent to agriculture, off-road vehicles, development, and other non-ASH related activities. At any one time, the total number of lizards at risk in the action area in these isolated parcels is estimated at 606, of which 100 would likely be incidentally taken during construction. We estimate that roughly 400 flat-tailed horned lizards in isolated parcels would likely die as a result of the ASH.

Ongoing road kills between County 14th and the A Canal: We expect that, although road mortality will create a mortality sink, this area is part of a larger population that includes the Yuma Desert MA, and thus would not be subject to extirpation. Thus, we expect ongoing mortality on the ASH. Based on observed road kills elsewhere in the Yuma Desert, we estimate 20 flat-tailed horned lizards per year will be killed on the ASH between County 14th and the A Canal; this number will decline over time as populations are depleted along the highway, but would not be expected to drop to zero unless or until such time that the area is isolated by development or other disturbance from the Yuma Desert MA.

Maintenance of the ASH:

Maintenance activities are anticipated to result in small numbers of flat-tailed horned lizards killed by vehicles both on and off roads within the right-of-way. Because vehicle traffic by maintenance workers is expected to be much less than by the public using the ASH, numbers of lizards killed by maintenance activities will be relatively small. We estimate three flat-tailed horned lizards will be killed by maintenance activities per year. This number will decline over time as populations are depleted along the highway.

The number of flat-tailed horned lizards captured and relocated will be monitored during construction; and although some road-killed lizards will no doubt be found, much of the incidental take will be difficult to detect. Our estimates of incidental take are based primarily on the number of acres impacted by the project (4,357) and our best estimate of densities of lizards on those acres (0.139). If either of those values is subsequently found to be substantially greater than our estimates, then anticipated incidental take will have been exceeded. If, during the course of the action, the level of incidental take is exceeded, such incidental take would represent new information requiring review of the reasonable and prudent measures provided. In that case, FHWA should provide an explanation of the causes of the taking and review with the AESO the need for possible modification of the reasonable and prudent measures.

EFFECT OF THE TAKE

In this biological opinion, the FWS determined that this level of anticipated take is not likely to result in jeopardy to the species.

REASONABLE AND PRUDENT MEASURES AND TERMS AND CONDITIONS

The prohibitions against taking the species found in section 9 of the Act do not apply until the

species is listed. However, we advise FHWA to consider implementing the following reasonable and prudent measure. If this conference opinion is adopted as a biological opinion following listing, this measure, with its implementing term and condition, will become non-discretionary.

The mitigation and compensation protocols in the conservation strategy, which were adopted by FHWA as conservation measures, were designed by the ICC to minimize the impacts of projects, including incidental take, to the maximum extent that is reasonable and prudent. Hence most of the measures that FHWA could reasonably take to minimize incidental take are already part of the proposed action. We have a few additional suggestions to minimize incidental take, reflected here as a reasonable and prudent measures and terms and conditions.

FHWA shall ensure that opportunities for illegal vehicle traffic onto and off of the ASH from the south, is minimized.

> FHWA shall work with ADOT and Border Patrol-Yuma Sector to discuss and develop concepts for minimizing illegal vehicle traffic onto and off of the ASH, particularly from Avenue E to Avenue 4E. Possible alternatives may include cable barriers or guardrails along the southern right-of-way fence, additional regulatory signs directed south in Spanish and English, and/or other options. If FHWA, ADOT, and Border Patrol can agree upon an approach, it shall be implemented.

FHWA will provide monitoring reports to us.

> FHWA will provide this office with two copies of the monitoring report described in part 7(i) of the conservation measures. These copies will be made and mailed to us within a week of receiving them from ADOT or the contractor. FHWA will ensure that ADOT completes and provides the reports promptly.

FHWA will facilitate our monitoring of the project.

> FHWA shall provide a point of contact at the field level so we can monitor implementation of this biological opinion. The point of contact may be a biological monitor, ADOT personnel, construction foreman, or others who can explain and describe the progress on the project as well as implementation of conservation measures and these terms and conditions.

Disposition of Dead or Injured Listed Species

Upon locating a dead, injured, or sick listed species initial notification must be made to the FWS's Law Enforcement Office, 2450 W. Broadway Rd, Suite 113, Mesa, Arizona, 85202, telephone: 480/967-7900) within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph if possible, and any other pertinent information. The notification shall be sent to the Law Enforcement Office with a copy to this office. Care must be taken in handling sick or

injured animals to ensure effective treatment and care, and in handling dead specimens to preserve the biological material in the best possible state.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

Due to the extensive coordination on this project among FHWA, ADOT, the ICC, MOG, and us, and adoption of the ICC/MOG's mitigation and compensation recommendations into the project, as well as funding by FHWA for a study to evaluate use of culverts by flat-tailed horned lizards, we have no further conservation recommendations.

REINITIATION NOTICE

This concludes the conference for the ASH. You may ask us to confirm the conference opinion as a biological opinion issued through formal consultation if the proposed flat-tailed horned lizard is subsequently listed. The request must be in writing. We will review the proposed action and if we find there have been no significant changes in the action as planned or in the information used during the conference, then we will confirm the conference opinion as the biological opinion for the project and no further section 7 consultation will be necessary.

After listing as threatened or endangered and any subsequent adoption of this conference opinion, FHWA shall request reinitiation of consultation if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the agency action that may affect the species in a manner or to an extent not considered in the conference opinion; 3) the agency action is subsequently modified in a manner that causes an effect to the species that was not considered in this opinion; or 4) a new species is listed or critical habitat designated that may be affected by the action.

The incidental take statement provided in this conference opinion does not become effective until the species is listed and the conference opinion is adopted as the biological opinion issued through formal consultation. At that time, the project will be reviewed to determine whether any take of the proposed species has occurred. Modifications of the opinion and incidental take statement may be appropriate to reflect that take. No take of the proposed species may occur between the listing of the species and the adoption of the conference opinion through formal consultation, or the completion of a subsequent formal consultation. Although not required, we recommend that FHWA implement the reasonable and prudent measure and term and condition herein prior to our final listing decision. If the species is subsequently listed, implementation of reasonable prudent measure and term and condition in any conference opinion adopted as a biological opinion, is mandatory.

We appreciate FHWA's extensive and collaborative efforts to identify and minimize effects to the flat-tailed horned lizard from this project. For further information please contact Jim Rorabaugh (x238) or Sherry Barrett (520) 670-6150 (x223). Please refer to the consultation number, 02-21-95-F-0479R1, in future correspondence concerning this project.

Sincerely,

Steven L. Spangle
Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (ARD-ES)
Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ
Field Supervisor, Fish and Wildlife Service, Carlsbad, CA (Attn: P. Sorensen)

Branch Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ
Regional Supervisor, Arizona Game and Fish Department, Yuma, AZ
Area Manager, Bureau of Reclamation, Yuma, AZ (Attn: C. Hoeft)
Ron Pearce, Range Management Officer, Marine Corps Air Station-Yuma, AZ
Area Manager, Bureau of Land Management, El Centro, CA
Area Manager, Bureau of Land Management, Yuma, AZ
Ocotillo Wells State Vehicular Recreation Area, Ocotillo Wells, CA (Attn: E. Hollenbeck)

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TRISTAR ENGINEERING AND MANAGEMENT, INC.

In Reply Refer to:
AESO/SE
02-21-95-F-0479R1

December 20, 2006

Mr. Robert E. Hollis, Division Administrator
Federal Highway Administration, Arizona Division
One Arizona Center, Suite 410
Phoenix, Arizona, 85004

Dear Mr. Hollis:

On October 14, 2005, we transmitted to you a draft conference opinion (CO) regarding effects of the proposed Area Service Highway (ASH), Yuma County, Arizona, on the flat-tailed horned (*Phrynosoma mcallii*), in accordance with 50 CFR 402.10 and your request for conferencing, dated September 8, 2005. The flat-tailed horned lizard was proposed for listing as a threatened species at that time; however, on June 28, 2006, that proposal was withdrawn. Although withdrawal of the proposed rule removed legal requirements found at 50 CFR 402.10, the flat-tailed horned lizard is the subject of a conservation agreement and strategy. Under that agreement, the Bureau of Reclamation, Marine Corps Air Station, and Bureau of Land Management (BLM) have agreed to pursue mitigation and compensation for effects to flat-tailed horned lizards and their habitat in accordance with their rights-of-way jurisdictions along the route of the ASH. Thus, we assume that the mitigation and compensation proposed in your February 2005 draft environmental mitigation measures for the ASH (Arizona Department of Transportation and Federal Highways Administration 2005) are still part of your proposed action. These measures are consistent with mitigation and compensation protocols in the 2003 Flat-tailed Horned Lizard Rangewide Management Strategy. In regard to compensation, you had proposed the following:

> Monetary 1:1 compensation will be provided for flat-tailed horned lizard habitat that is under the jurisdiction of agencies that are signatory to the flat-tailed horned lizard Conservation Agreement and that is lost or isolated due to the construction of the ASH.
>
> > A. Arizona Department of Transportation (ADOT) will fully compensate for approximately 623 acres of flat-tailed horned lizard habitat lost to the ASH right-of-way and approximately 3,654 acres of habitat isolated by the ASH (parcels 2, 3, and 4, see Figure 2 of the draft CO). If the City of Yuma agrees to a land exchange that would relocate the landfill site north of the ASH (Option A, below), ADOT will receive a credit of 328 acres towards its obligation for habitat compensation in recognition of its efforts to address threats to flat-tailed horned lizards in the Yuma Desert Management Area (MA).

Option A. ADOT will enter into an Intergovernmental Agreement with the City of Yuma and Bureau of Reclamation, prior to construction of the ASH between Avenue 4E to Avenue B, to exchange the existing proposed landfill site for Reclamation land north of County 23rd Street. ADOT will reimburse the City of Yuma for the cost of transferring the land to Reclamation and of obtaining an in-kind parcel on Reclamation land. To reimburse the City of Yuma for funds that have been expended in preparation for the site's development as a landfill, ADOT will provide funding for any in-kind investigations or permits that the City of Yuma has already invested in the portion of the landfill site south of County 23rd Street. Under Option A, ADOT will receive a credit of 328 acres towards its obligation for habitat compensation in recognition of its efforts to address threats to flat-tailed horned lizards in the Yuma Desert MA.

Option B. ADOT will compensate in full for the 623 and approximately 3,654 acres of habitat lost or isolated due to the project (4,277 acres).

B. BLM in California will provide a priority list for flat-tailed horned lizard parcels targeted for acquisition.

C. ADOT will appraise the priority properties identified by BLM.

D. ADOT will use appraised values to calculate compensation funds; the calculated values will include due diligence costs and administrative costs.

E. ADOT will then transfer compensation funds to BLM's compensation fund accounts as delineated in Flat-tailed horned lizard Interagency Coordinating Committee (2003).

From recent discussions, we understand that Option A is no longer being pursued, but we believe it is still an appropriate compensation option if agreements with the City of Yuma could be reached.

From the **Summary of Effects in the Context of the Status of the Species** in the CO, "Compensation funds obtained for loss of habitat will be used to acquire lands in California MAs and possibly to accomplish management to benefit the MAs and conservation of the flat-tailed horned lizard." We have been in discussion with representatives from BLM in Arizona and California, Bureau of Reclamation, Marine Corps Air Station, ADOT, as well as your office and others in recent months to decide how the land acquisitions and transfers to BLM would be accomplished. Early in the discussions, it became clear that ADOT could not acquire property in the State of California and turn it over to BLM. Several options were discussed, and BLM has recently proposed to accept the compensation funds in full from ADOT to complete the land acquisitions using BLM staff and contractors (November 22, 2006 letter from Steven Borchard, District Manager, BLM California Desert District, to Sam Maroufkani Deputy State Engineer, ADOT, Phoenix). We are writing to clarify our position on two topics regarding the acquisition process and to reiterate relevant portions of the Rangewide Management Strategy.

One-time payment. Funding from ADOT would be in the form of a one-time payment to BLM, which would be a best estimate of costs needed to cover purchase of the lands, a "contingency" amount to cover potential increases in the cost of land based on an assumed 10% per year increase, and all appraisal, staff, and contractor time, administrative, and other costs to

accomplish this work. The intent would be to make the best cost estimate possible with contingencies to acquire 4,277 acres in California. ADOT's compensation obligation would be met with this one time payment, regardless of whether we find at a later date that funds are inadequate to acquire all 4,277 acres, or if the funds are more than is needed. This is consistent with current compensation procedures and the Rangewide Management Strategy, in which compensation is provided by project proponents in a one-time payment, based on the best information available.

Uses of the Compensation Funds. Pages 63 and 64 of the Rangewide Management Strategy describe how compensation funds should be used to conserve the flat-tailed horned lizard. The document lists "Pre-authorized uses of funds" (Page 63), the top priority of which "shall be acquisition of inholdings"; however, various management options and environmental education can be funded, as well. "Unauthorized uses of funds" (Page 64) include funding planning actions for which agencies are already obligated in the implementation schedule of the Strategy. In meetings with the Flat-tailed Horned Lizard Management Oversight Group (MOG), a manager's group that oversees the implementation of the Strategy, it was decided that the top priority for use of the ASH compensation funds should be acquisition of lands in California MAs. Early in the process, we had discussed using some of the funds to assist Department of Homeland Security (DHS) in building a vehicle barrier along the U.S.-Mexico border in the Yuma Desert MA, but DHS has since funded that project in full.

Although acquisitions should be the top priority, we understand that acquisitions are subject to willing sellers and BLM can only acquire or accept parcels that meet certain criteria, consistent with their regulations. It may not be possible to find sufficient acceptable parcels that total 4,277 acres. Furthermore, available parcels vary in size and it may not be possible to acquire exactly 4,277 acres. As a result, excess funds may be available, which could be used to compensate for loss of habitat via "Pre-authorized uses of funds" other than land acquisition. However, consistent with the Strategy and the decision of the MOG, such use of funds should occur only after all efforts to acquire 4,277 acres in California MAs have been exhausted.

We appreciate your cooperation in finalizing a mitigation and compensation plan for the flat-tailed horned lizard that is consistent with the Rangewide Management Strategy. Continued implementation of the conservation agreement is key to minimizing threats to this species and eliminating the need to list it as a threatened species. If we can be of further assistance in the matter, please contact Jim Rorabaugh (x238) or Sherry Barrett (520) 670-6150 (x223) of my staff.

Sincerely,

Steven L. Spangle
for Field Supervisor

cc: Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ
Field Supervisor, Fish and Wildlife Service, Carlsbad, CA (Attn P. Sorensen)
Branch Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ
Regional Supervisor, Arizona Game and Fish Department, Yuma, AZ
District Manager, Bureau of Land Management, Moreno Valley, CA (Attn G. Thomsen, A. Stein)
Field Manager, Bureau of Land Management, El Centro, CA
Sam Maroufkani, Deputy State Engineer, Arizona Department of Transportation, Phoenix, AZ

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United States Department of the Interior
U.S. Fish and Wildlife Service
Arizona Ecological Services Field Office
2321 West Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951
Telephone: (602) 242-0210 Fax: (602) 242-2513

In Reply Refer to:
AESO/SE
02-21-95-F-0479R1
HPP-900-A(022)

February 23, 2007

Mr. Robert E. Hollis, Division Administrator
Federal Highway Administration, Arizona Division
One Arizona Center, Suite 410
400 East Van Buren Street
Phoenix, Arizona, 85004

Dr. Mr. Hollis:

The proposed Yuma Area Service Highway (ASH) in Yuma County, Arizona has been the subject of numerous environmental compliance documents, consultations, and discussions over the last decade. Compliance and project planning are nearing completion. In response to verbal requests from Steve Thomas of your staff and Melissa Maiefski of Arizona Department of Transportation (ADOT), we take this opportunity to review the process to date and finalize our recommendations for the ASH relative to the Endangered Species Act and a conservation agreement and strategy for one of the species affected – the flat-tailed horned lizard (*Phrynosoma mcallii*).

Your initial written request for formal consultation and conferencing on the project was dated October 2, 2002. Our final biological and conference opinion, dated July 24, 2003, found that the proposed action was not likely to jeopardize the continued existence of the threatened Peirson's milkvetch (*Astragalus magdalenae* var. *peirsonii*) and the proposed threatened mountain plover (*Charadrius montana*). We also concurred with your determination that the proposed action may affect, but was not likely to adversely affect, the Sonoran pronghorn (*Antilocapra americana sonoriensis*). You had requested conferencing on the proposed threatened flat-tailed horned lizard as well; however, between the date of your request and our opinion, the proposed rule to list the species was withdrawn. Subsequently, the proposed rule to list the mountain plover was withdrawn, as well, on September 9, 2003.

In an order from the Arizona District Court, the 2003 withdrawal of the proposed rule to list the flat-tailed horned lizard was set aside on August 30, 2005. In response, you requested formal conferencing on the lizard in a letter dated September 8, 2005. We issued a draft conference opinion (CO) for your review on October 14, 2005. However, the proposed rule was once again withdrawn in a Federal Register notice dated June 28, 2006. Withdrawal of the proposed rule removed legal requirements found at 50 CFR 402.10; hence, the CO will not be finalized.

Although the Endangered Species Act no longer applies, the flat-tailed horned lizard is the subject of a multi-agency Conservation Agreement and Rangewide Management Strategy (Flat-tailed horned lizard Interagency Coordination Committee [ICC] 2003). Under that agreement, the Bureau of Reclamation, Marine Corps Air Station, and Bureau of Land Management (BLM) have agreed to pursue mitigation and compensation for effects to flat-tailed horned lizards and their habitat in accordance with their rights-of-way jurisdictions along the route of the ASH. To comply with the Rangewide Management Strategy, you drafted environmental mitigation measures for the ASH in February 2005 (Arizona Department of Transportation and Federal Highways Administration 2005), which were evaluated as part of the proposed action for the ASH in our draft CO of October 14, 2005. That document and the included mitigation and compensation measures were the end product of much coordination, including several meetings and conference calls with permitting agencies on the project, the ICC, and the flat-tailed horned lizard Management Oversight Group (MOG). The mitigation measures and compensation in your February 2005 document adhere to the recommendations and protocols for such projects in the 2003 Rangewide Management Strategy. We greatly appreciate the diligent work of your staff, as well as ADOT staff, in working with us, the MOG, and ICC to craft mitigation and compensation consistent with that Strategy.

Several details of the compensation plan were unknown at the time of your February 2005 document and our October 2005 CO. Our letter to you of December 20, 2006, clarified our position regarding 1) a one-time compensation payment from ADOT to the BLM or other agency, and 2) use of the compensation funds, the first priority of which should be acquisition of lands within flat-tailed horned lizard Management Areas (MAs) in California. Not known at the time of our letter was exactly how the funds would be transferred and what agreements would govern that transfer and use of the funds. The BLM California Desert District, via the BLM Arizona State Office, has agreed to accept the one-time payment from ADOT and acquire and manage lands for the flat-tailed horned lizard in California MAs, in accordance with their policies and regulations. An agreement has been developed between BLM Desert District and ADOT, which were detailed in a February 6, 2007, letter to ADOT. The letter included a Proffer of Monetary Contribution form (Attachment 1 of the letter), which is the mechanism for transferring funds to BLM, and Flat-Tailed Horned Lizard Compensation for ADOT (Estimated Land Acquisition Costs – Attachment 2 of the letter), which shows a breakdown of anticipated costs for the 5-year project. Salient points of the agreement include:

- A one-time payment from ADOT to BLM Arizona State Office of $4,032,000 to compensate 1:1 for loss of 4,277 acres of lands along the ASH. The first priority for use of the funds is acquisition of lands in California MAs.

- Costs were based in part on an assumed initial $500/acre average price.

- The cost estimate includes a "contingency" to cover potential increase in the cost of land based on an assumed 7% per year increase in property values. The contingency was derived from land value increases estimated in the project area.

- The cost estimate also includes BLM direct and indirect costs, environmental site assessments, appraisal updates, GIS project setup, and other costs as outlined in Attachment 2 of BLM's February 3, 2007, letter.

- If excess land-purchase funds remain after acquisition of 4,277 acres in California MAs, then those funds may be banked to compensate for other ADOT highway projects.

Assuming the terms of the agreement outlined in the February 6, 2007, letter from the California Desert District are accepted and implemented by both BLM and ADOT, then that agreement will provide the mechanism to complete compensation commitments made in the environmental mitigation measures for the ASH (Arizona Department of Transportation and Federal Highways Administration 2005). Again, both the mitigation and compensation measures outlined in that document are consistent with the 2003 Rangewide Management Strategy. Continued implementation of the conservation agreement and strategy is key to minimizing threats to the flat-tailed horned lizard and precluding the need to list it as a threatened species. If we can be of further assistance in the matter, please contact Jim Rorabaugh (x238) or Sherry Barrett (520) 670-6150 (x223) of my staff.

Sincerely,

Steven L. Spangle
Field Supervisor

cc: Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ
Field Supervisor, Fish and Wildlife Service, Carlsbad, CA (Attn: P. Sorensen)
Branch Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ
Regional Supervisor, Arizona Game and Fish Department, Yuma, AZ
District Manager, Bureau of Land Management, Moreno Valley, CA
(Attn: G. Thomsen) (A. Stein)
Field Manager, Bureau of Land Management, Yuma, AZ
State Director, Bureau of Land Management, Phoenix, AZ (Attn: M. Taylor)
Field Manager, Bureau of Land Management, El Centro, CA
Sam Maroufkani, Deputy State Engineer, Arizona Department of Transportation, Phoenix, AZ
Melissa Maiefski, Arizona Department of Transportation, Tucson, AZ
Field Manager, Bureau of Reclamation, Yuma AZ (Attn: C. Hoeft)
Director, Range Management Department, Marine Corps Air Station, Yuma, AZ

Literature Cited

Arizona Department of Transportation and Federal Highway Administration. 2005. Yuma Area Service Highway environmental assessment and section 4(f) evaluation. Federal Project HPP- 900-A(022). Arizona Department of Transportation and Federal Highway Administration, Phoenix, AZ.

Flat-tailed horned lizard Interagency Coordinating Committee. 2003. Flat-tailed horned lizard rangewide management strategy. 2003 revision.

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-----Original Message-----
From: Dunning.Connell@epamail.epa.gov
[mailto:Dunning.Connell@epamail.epa.gov]
Sent: Tuesday, November 28, 2006 1:51 PM
To: Steve Thomas; Melissa Maiefski
Cc: Blazej.Nova@epamail.epa.gov
Subject: Yuma and South Mountain

Melissa and Steve,
Thanks for your call Melissa.

[Comments in the following paragraph refer to the Yuma Area Service Highway, Federal Project Number: HPP-900-A(022)]
I have not heard back from Sara Purcell regarding the Yuma Project. We spoke over a month ago, so I assume FHWA has no further questions about EPA's comments. I informed her that the ROD language was included in the EPA's last correspondence letter in case it is FHWA determination that an EIS is required for the project. EPA will not be providing any additional comments on the project unless another action on the project initiates further agency and public comment. Just let us know.

[Comments in the following paragraph refer to the South Mountain Freeway, Federal Project Number: NH-202-D( )]
We are still available to review an administrative draft of the mobile source air toxics analysis for the South Mountain project. Please send it to me via email once you have determined that it is ready to share. Do you have an estimate of when the Draft EIS will be available for comment? I have also attached our last EPA correspondence on the South Mountain Project which I promised that I would send to you Melissa - sorry for the delay!

Do you have any estimates/timeframes of other EIS's that will be completed in the next year?

Thanks again,
Connell
(See attached file: ConcernedCitizenLetter_SouthMountain_April14_2006_FINAL.doc)

Connell Dunning
U.S. Environmental Protection Agency
Environmental Review Office
75 Hawthorne Street, CED-2
San Francisco, CA 94105

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dunning.connell@epa.gov

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
ARIZONA-NEVADA AREA OFFICE
3636 NORTH CENTRAL AVENUE, SUITE 760
PHOENIX, ARIZONA 85012-1936

REPLY TO
Office of the Chief
Regulatory Branch

June 3, 2002

Mr. Wayne Colebank
Logan Simpson & Dye
51 W. Third Street, Suite 450
Tempe, Arizona 85281

File Number: 964-0108-00-CJL

Dear Mr. Colebank:

Reference is made to Tom Molt's May 30, 2002 memorandum in which an inquiry was made as to whether or not a Section 404 permit is required from the U.S. Army Corps of Engineers to construct the Yuma Area Service Highway, which will serve to provide access from Interstate 8 at Araby Road to US 95 in the Town of San Luis, Yuma County, Arizona.

The original request for this project (Segments 1 through 3) was made in November of 1995, and the official determination of no jurisdictional waters was issued December 2, 1997. The Corps project file has been amended to include the Avenue E and County 23rd Street sections in addition to the original three segments.

Based on the information furnished in your application and/or letter (referenced above), we have determined that your proposed project is not subject to our jurisdiction under Section 404 of the Clean Water Act. Since there are no waters of the United States within the aforementioned proposed project area, no Section 404 permit is required from our office.

The receipt of your application and/or letter is appreciated. If you have questions, please contact Dana Owsiany at (602) 640-5385 x 254.

Sincerely,

Cindy Lester

Cindy Lester
Chief, Arizona Section
Regulatory Branch